

Fact Sheet



For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-03900001-2013 (1 of 5)**

Application Received: **May 10, 2012**

Plant Identification Number: **039-00001**

Permittee: **E. I. DuPont de Nemours & Company**

Facility Name: **Belle Plant**

Mailing Address: **901 West DuPont Avenue, Belle, WV 25015**

Physical Location:	Belle, Kanawha County, West Virginia
UTM Coordinates:	451.90 km Easting • 4232.60 km Northing • Zone 17
Directions:	Route 60 exit; right on DuPont Avenue; left at plant gate.

Facility Description

Waste Treatment Plant. The waste treatment plant operation consists of process and sanitary waste collection, equalization/isolation, neutralization, aeration, clarification, de-watering of waste sludge, lime stabilization and landfilling of de-watered sludge. Raw materials used at the Waste Treatment plant include 50% caustic, sulfuric acid, phosphoric acid, anti-foams, aqueous polymers and calcium oxide.

Boilers. Steam is generated by burning natural gas in four indirect-fired boilers generating 450 psig steam. A segment of the 450 psig steam is used by plant processes. The remaining is reduced to 150 psig and 10 psig steam. Water used to feed each boiler is conditioned at the Powerhouse Filtered Water Plant where water is filtered in the sand filters to remove sediment.

Fire Water Pumps. There are 2 diesel engines (575 HP and 800 HP) that are used in emergencies for the fire water pumps.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions Group 1	2011 Actual Emissions Facility Wide
Carbon Monoxide (CO)	360	123.9
Nitrogen Oxides (NO _x)	1202	345.4
Particulate Matter (PM ₁₀)	32.6	9.0
Total Particulate Matter (TSP)	32.6	9.0
Sulfur Dioxide (SO ₂)	4.2	1.4
Volatile Organic Compounds (VOC)	117	483.8
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions Group 1	2011 Actual Emissions Facility Wide
Methanol	65.2	29.1
Other HAPs	10.2	22.4

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit over 100 tons per year of Carbon Monoxide, Nitrogen Oxides, and Volatile Organic Compounds. The facility also has the potential to emit over 10 tons per year of Methanol and over 25 tons per year of aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, E. I. DuPont de Nemours & Company's Belle Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:

45CSR2

45CSR6

45CSR7

45CSR10

45CSR11

45CSR13

45CSR16

PM from combustion of fuel in indirect heat exchangers.

Open burning prohibited.

PM from manufacturing process operations.

Control of sulfur oxide emissions.

Standby plans for emergency episodes.

Pre-construction permit.

New Stationary Sources

	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards of Hazardous Air Pollutants
	40 C.F.R. 60, Subpart IIII	Standards of performance for stationary compression ignition internal combustion engines.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63, Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
	40 C.F.R. 80, Subpart I	Regulation of Fuels and Fuel Additives for Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR40	CAIR NOx Ozone Season Trading Program

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-1567A	09/06/2002	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

Since the most recent version of this permit, the following changes have been identified:

45CSR1 - NOx Budget Trading Program

This rule has been repealed. As such, previous Condition 3.1.9 and Appendix A of this Permit have been removed.

45CSR30 – Requirements for Operating Permits

There are significant differences in the Potential to Emit (PTE) for Group 1 for VOC's and HAP's. In 2012 the facility conducted a sampling program at the Wastewater Treatment Plant and used those results in conjunction with a software model (TOXCHEM+) to validate the previous emissions estimates for the

WWTP. The significant difference between previous estimates and the model results was the methanol emissions for the equalization tank.

There are four new pieces of equipment added to the permit during this renewal. They are emission units 601.010, 601.011, 600.301, and 600.304. As a result of new modeling of air emissions, Wastewater Collection Sump (600.301) and Wastewater Equalization Tank (600.304) are no longer insignificant emission units. None of the added equipment have applicable requirements.

40 C.F.R. 63, Subpart ZZZZ - National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

There have been two emergency fire pump compression ignition engines added to this Permit. FP#1 is a 2008 diesel engine rated at 575 HP. As it is an emergency stationary RICE located at a major source of HAP emissions, has a site rating of more than 500 brake HP, and was installed after June 12, 2006, it is subject to 40CFR§63.6640(f)(1). Condition 6.1.1 requires the operation of the engine as follows:

- a) There is no time limit on the use of the engine in emergency situations.
- b) The engine can be run for the purpose of maintenance checks and readiness testing less than 100 hours per year.
- c) The engine can be run for non-emergency situations for 50 hours per year, but those hours count towards the time limitations from b) above.

The other emergency fire pump compression ignition engine is FP#4D, which is a 1993 800 HP diesel engine. As it is an emergency stationary RICE located at a major source of HAP emissions, has a site rating of more than 500 brake HP, and was installed before June 12, 2006, it is subject to 40CFR§63.6640(f)(2). Condition 6.1.2 requires the operation of the engine as follows:

- a) There is no time limit on the use of the engine in emergency situations.
- b) The engine can be run for the purpose of maintenance checks and readiness testing. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.
- c) The engine can be run for non-emergency situations for 50 hours per year. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

40CFR60, Subpart IIII - Standards of performance for stationary compression ignition internal combustion engines.

FP#1 is an emergency fire pump compression ignition engine added to this Permit. FP#1 is a 2008 diesel engine rated at 575 HP and 15 liters/cylinder displacement. 40CFR§60.4205(c) states that the fire pump is subject to the emission limits given in Table 4 to Subpart IIII. This is given in Condition 6.1.3. Condition 6.1.4 requires the Permittee to meet the emissions limits given over the life of the engine. Condition 6.1.5 gives sulfur content and Cetane index or aromatic content for the fuel used. Condition 6.1.6 requires the Permittee to install a non-resettable hour meter prior to startup of the engine if they do not meet the standards applicable to non-emergency engines. Condition 6.1.7 requires the Permittee to purchase, install, and operate FP#1 in order to meet the emission limitations of Condition 6.1.3.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

40CFR60, Subpart IIII - Standards of performance for stationary compression ignition internal combustion engines.

FP#4D is an emergency fire pump compression ignition engine added to this Permit. FP#4D is a 1993 800 HP diesel engine. 40CFR60, Subpart IIII only applies to fire pump engines manufactured after July 1, 2006, therefore this fire pump is not subject to Subpart IIII.

45CSR7 – Control Particulate Matter from Manufacturing Processes.

Sulfuric Acid is stored in a tank (OOP-01) at the WTP. Although Table 45-7B limits Sulfuric Acid Mist and/or Vapor via 45CSR§7-4.2, the PTE for this unit is less than 0.3 PPY or 0.00015 TPY. 45CSR§7-10.6 exempts these requirements for sources of emissions that have a PTE of less than one tenth of a pound (0.1) per hour of mineral acids and an aggregate of less than one hundred (100) pounds per year for all sources of mineral acids located at the source. Therefore, section 4.2 of Rule 7 does not apply to this unit.

Phosphoric Acid comes in totes to the WTP (OOP-02). Although Table 45-7B limits Phosphoric Acid Mist and/or Vapor via 45CSR§7-4.2, the PTE for this unit is less than 1.2 PPY or 0.0006 TPY. 45CSR§7-10.6 exempts these requirements for sources of emissions that have a PTE of less than one tenth of a pound (0.1) per hour of mineral acids and an aggregate of less than one hundred (100) pounds per year for all sources of mineral acids located at the source. Therefore, section 4.2 of Rule 7 does not apply to this unit.

40 CFR 64 – Compliance Assurance Monitoring

CAM was determined to not apply to this Group from the last renewal. The only source with an emission unit is the Lime Silo, and it has not changed since the last renewal. Therefore, CAM does not apply.

Greenhouse Gas Tailoring Rule

This is a renewal Title V Permit and there have been no changes that would have triggered a PSD permit. As such, there are no applicable GHG permitting requirements.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	January 11, 2013
Ending Date:	February 11, 2013

All written comments should be addressed to the following individual and office:

Mike Egnor
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Mike Egnor
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Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1208 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Not applicable.